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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/414,082	10/06/1999	KENNETH M. BUCKLAND	062891..340	2772

7590 04/16/2003

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EXAMINER

PHILPOTT, JUSTIN M

ART UNIT	PAPER NUMBER
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2665

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DATE MAILED: 04/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/414,082

Applicant(s)

BUCKLAND ET AL.

Examiner

Justin M Philpott

Art Unit

2665

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 February 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-9, 11-17 and 19-48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-9, 11-17 and 19-48 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 October 1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. In the Amendment filed February 11, 2003, Applicant has amended the specification to correct typographical errors and has amended the claims to correct typographical errors and provide proper antecedent basis. Accordingly, the specification is no longer objected to and the claim rejections under 35 U.S.C. 112, second paragraph set forth in the previous office action have been overcome in view of the Amendment. Applicant has canceled claims 1, 10 and 18 and has amended claims 3, 4, 6, 12-14, 20, 21 and 23 to include the limitations of the canceled claims. Applicant has added new claims 27-48.

2. While it was indicated in the previous office action that claims 3, 4, 6, 12-14, 20, 21 and 23 would be allowable if rewritten in independent form to include all of the limitations of the base claim and any intervening claims and rewritten to overcome any rejections under 35 U.S.C. 112, second paragraph, the statement indicating allowable subject matter is withdrawn in view of the newly discovered reference(s) to Lichtash et al. Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 2-6, 8, 9, 11-14, 16, 17, 19-23, 25-29, 31, 33, 35, 37, 39, 41, 43, 45, 47 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,195,090 to Bolliger et al. in view of U.S. Patent No. 5,193,087 to Lichtash et al.

Regarding claims 3, 12, 20 and 48, Bolliger teaches a method in a TDM network (col. 3, lines 54-55) having a plurality of switchable paths (207, see FIG. 2) to a common destination (100) wherein the method comprises: receiving TDM traffic from a traffic source (203) as a plurality of copies of traffic routed along a plurality of paths (207) (e.g., see also col. 2, lines 50-52); configuring a TDM switch (201) to provide a route to a common destination (100) for each one of the paths (207); determining a qualified copy of the traffic (e.g., col. 20, lines 63-68, and col. 21, lines 25-42); and discarding all copies of the traffic except for the qualified copy (e.g., col. 21, lines 39-40) such that only the qualified copy is passed to the TDM switch for routing to the common destination. While Bolliger alone does not specifically teach each one of the paths (207) having a receive circuit, Bolliger recognizes in FIG. 1 (prior art to Bolliger) that having a receive circuit (e.g., interface 132) for each path (107) is well known in the art for the purpose of qualifying received communications (qualifying received communications to pass only those of a particular format – e.g., see col. 9, lines 2-21 regarding interfaces 142 and lines 27-39 regarding interfaces 132 for each path 107 and having the same functionality as interfaces 142). Thus, at the time of the invention it would have been obvious for one having ordinary skill in the art to include a receive circuit for each path as suggested by Bolliger (regarding FIG. 1) in the method taught by Bolliger as suggested by Bolliger for the purpose of qualifying received communications. Bolliger, however, may not specifically disclose detecting a loss of a keep-alive signal at a receive circuit.

Lichtash teaches a TDM system with built-in performance monitoring wherein the system is activated by means of a generated keep-alive signal when a received signal has been lost (e.g., see col. 9, lines 1-37). In the system of Bolliger, the step of determining a qualified copy of the traffic would be improved by receiving a keep-alive signal such that the system may be activated by the keep-alive signal when a received signal has been lost. Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to include generating a keep-alive signal in the system of Bolliger wherein the step of determining comprises detecting a loss of a keep-alive signal at one of the receive circuits in order to provide improved built-in performance monitoring wherein system is activated by means of a generated keep-alive signal when a received signal has been lost.

Furthermore, regarding claim 12, Bolliger teaches a TDM network as described above regarding claim 3 and further teaches, between transmission from 203 to 202 (in FIG. 2), operably setting a kill-bit (e.g., CRC field, see col. 20, lines 37-44) which indicates whether the traffic should be switched or discarded. Since Bolliger further teaches transmission by air (203 to 202), it is preferable to operably set a kill-bit after air transmission (wherein error is more likely to occur). However, if the network does not involve transmission by air, it would be advantageous to operably set a kill-bit at receive circuits which are coupled to monitor signals on respective paths to the TDM switch. Thus, at the time of the invention it would have been obvious for one having ordinary skill in the art to have receive circuits operable to set a kill-bit to accompany TDM traffic sent to the TDM switch to indicate whether the TDM traffic should be switched or discarded. Further, Bolliger teaches a memory (buffer 603, see FIG. 6 and col. 20, line 52) operable to receive traffic with accompanying kill-bits (CRC field, see col. 20, lines 37-

44), operable to store the traffic having an accompanying kill-bit that has not been set, and operable to discard the traffic having an accompanying kill-bit that has been set. Bolliger also teaches, as discussed above, a communication path (207) operable to convey qualifying information (signal quality field) for the paths.

Furthermore, regarding claims 20 and 48, Bolliger teaches the method described above regarding claims 3 and 12 and further teaches cell 202 comprising a conventional computer input and output device (e.g., see col. 11, lines 54-57). Thus, Bolliger anticipates the method of claims 3 and 12 realized in a program embodied in computer-readable media.

Regarding claims 2, 11 and 19, Bolliger further teaches the step of determining comprises receiving management traffic (signal quality field, e.g., col. 12, lines 62-68) on a path indicating a degradation or loss of signal on the path.

Regarding claims 4, 13 and 21, the keep-alive signal taught by Lichtash (e.g., see col. 9, lines 1-37) encompasses an alarm indication signal.

Regarding claims 5 and 22, Bolliger further teaches between transmission from 203 to 202 (in FIG. 2) operably setting a kill-bit (e.g., CRC field, see col. 20, lines 37-44) which indicates whether the traffic should be switched or discarded.

Regarding claims 6, 23 and 28, Bolliger FIG. 1 teaches receive circuits (e.g., 132) coupled to a common bus (130), anticipating communicating information such as qualifying information between the receive circuits (e.g., see cols. 8-9).

Regarding claims 8, 9, 14, 16, 17, 2-27, 29, 31, 33, 35, 37, 39, 41, 43, 45 and 47, Bolliger may not specifically disclose utilizing virtual tributaries or STS-1 formats, however, routing in a TDM network using the formats of virtual tributaries or STS-1 is commonly known in the art.

Art Unit: 2665

Thus, at the time of the invention it would have been obvious for one having ordinary skill in the art to use VT or STS-1 formats for the TDM traffic, and to configure the TDM switch to route traffic for a given VT, in the teachings of Bolliger. Further, regarding claims 14, 27 and 29, Bolliger teaches setting an accompanying kill-bit (e.g., CRC field, see col. 20, lines 37-44) which indicates whether the traffic should be switched or discarded (i.e., indicates whether the TDM traffic is not pass-through).

5. Claims 7, 15, 24, 30, 32, 34, 36, 38, 40, 42, 44 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,903,371 to Arecco et al. in view of Bolliger in view of Lichtash.

Regarding claims 7, 15, 24, 30, 32, 34, 36, 38, 40, 42, 44 and 46, Arecco teaches a network (see FIG. 1) comprising a first path (5-8) in a first direction (13) around a SONET UPSR and a second path (9-12) in a second direction (14) around the SONET UPSR, which provides an optical self-healing-ring communication network. However, Arecco does not teach the steps of the method described in claims 3, 12, 20 and 48 for providing traffic qualification.

Bolliger in view of Lichtash teaches the method of claims 3, 12, 20 and 48 as discussed above. Bolliger applies the steps of this method to a wireless access telephone-to-telephone network to provide improved traffic qualification means (e.g., see Bolliger cols. 3-5), and specifically to provide efficient routing of traffic between a plurality of cells wherein efficient use of transmission resources is achieved in conserving bandwidth (e.g., see col. 3, lines 65-67, and col. 5, lines 38-40). Thus, at the time of the invention it would have been obvious for one having ordinary skill in the art to apply the steps of the above method of Bolliger to a SONET

Art Unit: 2665

UPSR such as that taught by Arecco in order to provide improved traffic qualification means in a SONET UPSR by providing efficient routing of traffic between a plurality of cells wherein efficient use of transmission resources is achieved in conserving bandwidth.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin M Philpott whose telephone number is 703.305.7357. The examiner can normally be reached on M-F, 9:00am-5:00pm.

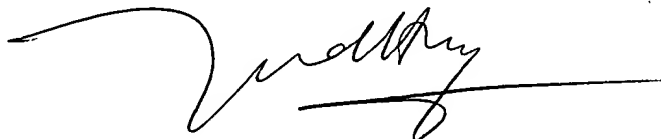
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy D Vu can be reached on 703.308.6602. The fax phone numbers for the organization where this application or proceeding is assigned are 703.872.9314 for regular communications and 703.872.9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703.305.4750.

Justin M Philpott



April 8, 2003



HUY D. VU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600